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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH
HARRISBURG 17120

May 20, 1970

Hydrogeologic Investigation of the
William Dick Lagoons
West Clan Township, Chester County

Charles Raha
Ass't. Reg. Sanitary Engineer
Operations - H.S. Reg. I - Phila.

Through: Ground Water Geologist
Division of Water Quality

Carlyle W. Westlund
Geologist III
Division of Water Quality

A field investigation was conducted on May 8, 1970, of the William Dick Lagoons, as requested by Richard J. Pastor, WPCS I of Philadelphia. The location is approximately 1,000 feet south of Township Road 435 and 1,500 feet northwest of Township Road 364 in West Clan Township, Chester County. Present at the time of investigation at the site of the lagoons were Thomas Cayhill, Environmental Engineer, Chester County Health Department; Jo Miles Cary, Photographer, and Robert Howard, Reporter for the Coatesville Record; William B. Keen, Jr., Attorney, Coatesville; Clifford Meyers, Supervisor, West Clan Township; and Richard J. Pastor, WPCS I, and myself of the Pennsylvania Department of Health.

There are three lagoons protected on the downslope side by an earthen dike, approximately 3½ feet high. The lagoons are located 7.50 inches north and 3.50 inches west of the southeast corner of the Honeybrook 7½ minute quadrangle (1955). These lagoons are near the top of a broad divide on the southeast side at an elevation of 940 feet with a local relief of approximately 220 feet. Complaints are being received in Region I from Mr. Clifford Meyers, Chairman of the Township Supervisors of West Clan Township. These lagoons are being used for disposal of various chemical wastes from the Chemical Leman Tank Lines, Inc. The wastes are the result of washing chemical tank trucks containing a variety of chemicals or chemical products.

Recently some geese got in the lagoons and had to be destroyed. Since that occurrence a call was received by Region I from the Governor's Office concerning the problem. The most recent complaint was from Mr. Meyers who stated he believes the ground waters are being polluted. He bases his complaint on the level of lagoons dropping 4 to 6 inches per day from personal inspection. At the time of the inspection Mr. Meyers stated he witnessed the digging of at least one lagoon to a depth of approximately 12 feet. He also stated the lagoons were not lined and the material dug from the lagoons was used for a retainer wall. The annual precipitation for the area is approximately 42 inches and the annual evaporation is approximately 34 inches, leaving a surplus precipitation of 12 inches per year. The lagoons upon visual inspection showed no evidence of overflowing or surface discharge.

The soils are the Edgemont Channery with a thin layer of organic material on top and dark gray loams and silt loams beneath. These soils are moderately deep well drained with permeabilities moderately rapid to rapid.

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The bedrock is the Chickies quartzite, Lower Cambrian in age and is up to 500 feet thick in the area. It is composed of pure quartzite and sericitic quartz schist. The rock is very resistant forming prominant hills. The upper part is thin bedded, fine quartzite with sericitic partings, which in places developes into a sericitic quartz schist. The sericite upon disintegration forms a fine white siliceous clay. The lower member, the Hellan, 200 to 400 feet thick, is a quartz conglomerate with scattered rounded quartz pebbles, conglomerate beds and interbedded black shale. These rocks are fractured and are bounded on the north and south by high angle faults with the upthrust rock to the north. One fault is approximately 2,500 feet to the south and trends slightly north of east. The second fault is approximately 3,000 feet to the north and trends east-northeast.

Because of the dense character of the Chickies quartzite, water moves through secondary openings along joints, fractures, and bedding planes. Due to the high elevation, the water table is deep. Records show wells ranging from 40 to 1,069 feet, with yields from 1 to 225 gallons per minute. The water was low in total dissolved solids and hardness ranging from 19 to 27 mg/l.

Summary: The William Dick Lagoons are receiving waste water used in washing chemical tank trucks belonging to the Chemical Leman Tank Lines, Inc. Complaints received by the Regional I Health Office concerning geese kills and the pollution of ground water, have resulted in this field investigation. The lagoons are unlined and located on the top of a broad ridge underlain by the resistant Chickies quartzite. Soils are well drained with moderate to rapid permeability. and the bedrock is fractured, allowing rapid percolation of surface waters. The annual precipitation is 42 inches and the annual evaporation is 34 inches, leaving an excess of 12 inches of precipitation. The excess precipitation along with waste waters dumped into the lagoons, should result in overflow of the lagoons. Because of the permeable soils and fractured quartzite bedrock, the lagoons discharge into the ground water. The waste water dumped into the lagoons is now moving down to the ground water. This represents a discharge to the waters of the Commonwealth without a Sanitary Water Board permit and is resulting in the pollution of ground water.

Recommendations: William Dick should immediately cease all discharge of industrail wastes to the lagoons and immediately remove all industrial wastes from the lagoons and destroy these lagoons. If William Dick of the Chemical Leman Tank Lines, Inc. wish to discharge industrial wastes, they must obtain a Sanitary Water Board permit. If discharge is to a lagoon, the lagoon must be water tight, and the overflow collected and treated before discharge. The preferred method would be to discharge treated waste waters to a stream.

CWW:lks
cc: Mr. Beechwood, Phila.
Dr. Lane, Phila.
Mr. Pastor, Phila.
Mr. Cayhill, Chester County
Office of Legal Council
Dr. Emrich
Mr. Westlund
30 day
File

AR100021

5 - 335 - 0798

Walt Stanley   Try [illegible] is Pollution

3. lagoon I.W. Discharge

Dick pastor [illegible] Aux. I

Honey[illegible] 7 1/2"

7 1/2" N[illegible]

.3, 3" W[illegible]

Barren [illegible]

Chemical lagoon thick lines

soap floor [illegible]

See GHE Monday

[illegible]

Dick Knoblock

3-015-334-0021

AR100022

11096 Hydrogeologic Investigation
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DIRECT DISCHARGE TO GROUND WATER

Investigation of William D. Ingram Date _____

Requested by Walt Stanley Permit No. _____

Persons Present:

Name	Affiliation	Address

Location: County Clinton Co. (1100' South of) Boro/Twp West Keating (1500 NW)

Roads T 435 ~~east~~, T 264 ~~east~~

Other Telegraph P.O.

7.50 inches north, 3.60 inches west of the southeast corner Mill Creek Quadrangle

7½ minute 1955 date

_____ N latitude _____ W longitude

Topographic Position & Site Description	Elev.	Relief
Ridge Top	940	220'

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J. MILES CARY PHOTOGRAPHER — COATESVILLE RECORD

BOB HOWARD REPORTER — " "

WILLIAM R KEEN, JR LAWYER Box 207 COATESVILLE, PA

CLIFFORD MYERS SUPERVISOR WAGONTOWN PA

Gregor, lawrence. Spring #1 about 10+GPM 3-4 yr ago sample taken to West Chester Co. Health office report not fit to drink. odor + taste like cream.

Spring #2 about 8-10GPM was about 75' south this spring was better and water was potable.

Well Trainer #3 well 80' deep water at 12'? behind house sample from house top.

Mrs trainer says about 2-3 yrs ago water was tested and unfit to drink. They had to haul water for time.

sample #4 250' below road spring flow about 5 GPM.

sample #5 Spring about 400' above road behind house not on map

Flow 30+GPM.

Sample #6 spring House 7-10 G.P.M.
C. W. Baldwin

Sample #7 Pequea Indian spring Rt 10 at bridge

WILLIAM R. KEEN, JR.
ATTORNEY AT LAW
116 E. LINCOLN HIGHWAY
COATESVILLE, PA.

RESIDENCE PHONE
384-1673

384-1016

May 15, 1970

Mr. Carlyle Westlund
Bureau of Sanitary Engineering
P. O. Box 90
Harrisburg, Pennsylvania

Re: Lagoons, West Caln Township

Dear Mr. Westlund:

I have located the results of the tests we discussed and am enclosing them for whatever service they may be to you.

Sincerely,

William R. Keen, Jr.

WRK/ah

Enc.